

variably dense liquid retains approximately its horizontal stratification; e. g., oil standing over water can be siphoned off without much disturbing the water. When the density varies continuously, the siphon would tend to draw from the horizontal stratum at which it opens; or if the liquid escapes slowly through an aperture in the bottom of the containing vessel only the lower strata are disturbed. So when the revolving fluid is drawn off near a point on the rotation axis the surfaces of constant circulation tend to remain cylindrical, and the more decidedly the faster the rotation. The escaping liquid is drawn always from along the axis, and not symmetrically in all directions, as when there is no rotation. The stability of fluid motion in cylindrical strata requires only an increase outward in the square of the circulation; but if the latter be in both directions this involves discontinuities and for stability rigid symmetry with respect to the axis. Without this limitation the motion will be unstable, so that stability really requires circulation in one direction only. The general question of two-dimensional motion of liquids between fixed coaxial cylindrical walls has been treated by the author in a former paper ("Scientific Papers," v. 1, p. 487), and it may be shown, as on the lines of the demonstration there given for plane strata, that the motion in cylindrical strata is stable provided that the rotation either continually increases or continually decreases in passing outward from the axis.—*G. W. de T[unzelmann]*.

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**Henry B. Scudder, 1844-1917.**

By G. N. SALISBURY, Meteorologist and Section Director.

[Weather Bureau Office, Seattle, Wash., Sept. 12, 1917.]

Mr. Henry B. Scudder, cooperative observer of the Weather Bureau at Moxee near North Yakima, Wash., died at his home in Moxee on July 20, 1917. The Moxee cooperative station was under his direction from March 11, 1892, until the date of his death. His record was

without interruption for a period of 25 years 4 months, making it the longest individual cooperative record kept in the State of Washington.

He was born in Brookline, Mass., June 18, 1844. He was a student at Williams College, when, at the outbreak of the Civil War, he enlisted as a private in the Forty-fifth Massachusetts Regiment. He moved to North Yakima, Wash., in 1888, and settled with his family on his Moxee ranch. He was actively interested in the development of the Yakima Valley, assisting in the organization of several of the first large irrigation enterprises, and helped toward bringing about Government reclamation work in the valley. He brought from the East the first registered Holstein cattle in the valley. For many years he was one of the heaviest hop growers in the valley, and spent much time and interest to better that branch of farming. He built the first silo in his part of the State. For 27 years he was a director of the First National Bank of North Yakima, and was the oldest real estate and insurance operator in the city, maintaining his business uninterruptedly for about 28 years.

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A long record with the same exposure, and so far as possible with the same instruments and by the same observer, is the prime fundamental requisite for reliable knowledge of the climate of any section of the globe lying outside the Tropics. Those who secure to us such records deserve to be enrolled on the list of honor in climatology and science, and it is a pleasure to us all to record the above tribute to Mr. Scudder. Our satisfaction is heightened by a communication which states that Miss Alice B. Scudder, daughter of the deceased, has volunteered to continue the excellent record already secured. We may thus justly expect to secure, eventually, another specially long and notably homogeneous record whose observers will be listed with the other honorable names found in the list "Distinguished Cooperative Observers" (MONTHLY WEATHER REVIEW, June, 1907, 35:277-278).—C. A. jr.